

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

SAMSUNG ELECTRONICS CO., LTD.	)	
AND SAMSUNG SEMICONDUCTOR,	)	
INC.,	)	
	)	
Plaintiffs,	)	
	)	C.A. No. 21-1453 (RGA) (JLH)
v.	)	
	)	
NETLIST, INC.,	)	
	)	
Defendant.	)	
<hr/>		
NETLIST, INC.,	)	
	)	
Counterclaim Plaintiff,	)	
	)	
v.	)	
	)	
GOOGLE LLC, ALPHABET INC.,	)	
SAMSUNG ELECTRONICS CO., LTD.	)	
AND SAMSUNG SEMICONDUCTOR,	)	
INC.,	)	
	)	
Counterclaim Defendants.	)	

**JOINT CLAIM CONSTRUCTION CHART**

Pursuant to the Court’s Scheduling Order (D.I. 61), as amended by stipulation of the parties and Order of the Court (D.I. 72), Plaintiffs and Counterclaim-Defendants Samsung Electronics Co., Ltd. and Samsung Semiconductor, Inc. (collectively “Samsung”), Counterclaim-Defendants Google LLC and Alphabet Inc. (collectively “Google”), and Defendant and Counterclaim-Plaintiff Netlist, Inc. (“Netlist”) hereby file this Joint Claim Construction Chart, attached hereto as Exhibit 1. The Joint Claim Construction Chart includes each party’s proposed construction of the disputed claim terms, phrases, or clauses from U.S. Patent No. 10,217,523 (“the ’523 patent”), along with citation to intrinsic evidence in support of their respective proposed clam

constructions. The Chart also includes the agreed-upon meaning of certain claim terms, phrases or clauses from the '523 patent.

The parties have agreed to stay the claim construction deadlines with respect to U.S. Patent Nos. 9,858,218 and 10,474,595, pending the Court's rulings on Samsung's motion to stay (D.I. 115) and Google's motion to dismiss or stay (D.I. 63). The parties will meet and confer regarding the stayed deadlines, if necessary, after the Court rules on the above-referenced motions.

The parties reserve their rights to amend and/or supplement their positions in this Joint Claim Construction Chart with additional intrinsic evidence in their claim construction briefs to rebut positions taken by the other party and to cite to intrinsic evidence identified by the other party. The parties further reserve the right to cite patents or other prior art cited during prosecution of the '523 patent in support of their proposed claim constructions. Additionally, the parties reserve their rights to assert that their proposed claim constructions are supported by the plain and ordinary meaning of the terms and to introduce extrinsic evidence to the extent the Court permits such evidence.

The parties have included copies of the '523 patent and portions of the intrinsic record as exhibits to this Joint Claim Construction Chart as follows:

<b>Exhibit</b>	<b>Title</b>
A	U.S. Patent No. 10,217,523
B	Excerpts from the prosecution history of U.S. Patent No. 10,217,523
C	IPR2022-00063, Paper No. 13 (May 5, 2022), Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 7,064,005
D	IPR2020-01421, Paper No. 6 (Dec. 18, 2020), Patent Owner's Preliminary Response
E	IPR2014-00970, Paper No. 10 (Sept. 24, 2014), Patent Owner's Preliminary Response
F	IPR2014-00970, Paper No. 16 (Mar. 17, 2015), Patent Owner's Response

Exhibit	Title
G	IPR2014-01372, Paper No. 11 (Dec. 18, 2014), Patent Owner's Preliminary Response
H	IPR2017-00560, Paper No. 6 (Apr. 10, 2017), Patent Owner's Preliminary Response
I	IPR2017-00561, Paper No. 6 (Apr. 10, 2017), Patent Owner's Preliminary Response
J	U.S. Patent No. 8,154,901
K	Provisional App. No. 61/044801
L	Declaration of William Mangione-Smith in Support of Netlist's Constructions of Disputed Terms, dated May 26, 2017, Case No. 16-cv-01605-JLS-JCG (C.D. Cal.)
M	Excerpts from the prosecution history of U.S. Patent No. 10,217,523
N	IPR2022-00063, Paper No. 1 (Oct. 15, 2021), Petition For <i>Inter Partes</i> Review Of U.S. Patent No. 10,217,523
O	IPR2014-00970, Paper No. 1 (June 18, 2014), Petition For <i>Inter Partes</i> Review Of U.S. Patent No. 8,001,434
P	IPR2014-01372, Paper No. 1 (Aug. 22, 2014), Petition For <i>Inter Partes</i> Review Of U.S. Patent 8,001,434

Dated: July 3, 2023

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July 3, 2023

**JOINT CLAIM CONSTRUCTION CHART: U.S. PATENT NO. 10,217,523**

**A. AGREED CONSTRUCTIONS**

<b>Disputed Term, Clause, or Phrase</b>	<b>Agreed Construction</b>
“A memory module accessible in a computer system by a system memory controller via a system memory bus, comprising” cl. 1	The preamble is limiting.
“A memory module operable in a computer system with a system memory controller, the memory module comprising” cl. 19	The preamble is limiting.

**B. DISPUTED TERMS, CLAUSES, OR PHRASES**

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>"memory module"</p> <p>cls. 1–34</p>	<p>plain and ordinary meaning, limiting preamble, a memory module needs to include structures necessary to connect to a memory controller.</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:33-3:6, 5:4-12, 6:43-7:51, 12:63-13:3, Figs. 1–3 and associated disclosures, cls. 1-34.</p> <p>Ex. B ('523 FH) Amendment and Response dated July 11, 2016 at p. 17, Ex. M ('523 FH) Specification as submitted at pp. 6-7, [0024].</p>	<p>"printed circuit board on which memory integrated circuits are mounted"</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 1:1–2, 1:30–34, 3:34–36, 5:8–12, 5:28–34, 13:25–29, 7:1–29, 8:18–20, 8:30–37, 12:66–13:3, 13:28–29, Figs. 1–3 and associated disclosure.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Office Action dated Mar. 9, 2016 at p. 11; Amendment and Response dated July 11, 2016 at p. 17; Amendment and response dated Feb. 15, 2018 at p. 16; Ex. C (IPR2022-00063) Paper 13 (IPR Institution Decision) at p. 30; Ex. H (IPR2017-00560) Paper 6 (Patent Owner's Prelim. Response) at pp. 19–23; Ex. I (IPR2017-00561) Paper 6 (Patent Owner's Prelim. Response) at pp. 22–26; Ex. J (U.S. Patent No. 8,154,901) at 4:51–5:12, Fig. 3.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“memory device[s]”</p> <p>cls. 1–4, 9, 10, 12, 15, 16, 19–34</p>	<p>plain and ordinary meaning, memory semiconductor devices</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 1:41-47, 2:33-3:6, 5:4-6:11, 7:1-29, 7:52-8:9, Figs. 1-3 and associated disclosures, cls. 1–4, 9, 10, 12, 15, 16, 19–34 and all dependent claims thereof.</p>	<p>“memory integrated circuits”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at Abstract, 1:38–47, 5:4–27, 7:52–8:9, 12:63–13:16, 13:25–41, Figs. 1–3 and associated disclosure.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Amendment and Response dated July 11, 2016 at p. 17; Ex. J (U.S. Patent No. 8,154,901) at 6:29–49.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“first mode”</p> <p>cls. 1, 2, 19, 20</p>	<p>plain and ordinary meaning, a mode that differs from the “second” mode</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:38-61, 5:66-6:7, 10:26-31, 11:17-20, 13:59-14:10, 15:9-12, cls. 1, 2, 19, 20 and all dependent claims thereof.</p> <p><i>See also, e.g.</i>, Ex. N (IPR2022-0063) Paper 1 (Petition).</p>	<p>“normal (non-test) mode”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at Abstract, 1:30–34, 2:33–3:6, 5:66–6:3, 9:43–10:36, 13:44–14:4, Figs. 5–6 and associated disclosure; cl. 1.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Prelim. Amendment dated Apr. 18, 2015 at pp. 2–9; '523 FH Office Action dated Mar. 9, 2016 at p. 4; '523 FH Amendment and Response dated July 11, 2016 at pp. 3, 15–16; '523 FH Certification and Request for Consideration Under the After Final Consideration Pilot Program 2.0 dated Feb. 8, 2018; '523 FH Amendment dated Feb. 8, 2018 at pp. 3–4, 12; Ex. C (IPR2022-0063) Paper 13 (IPR Institution Decision) at pp. 27, 44; Ex. D (IPR2020-01421) Paper 6 (Patent Owner's Prelim. Response) at pp. 14–15; Ex. K (Provisional App. No. 61/044801) ¶¶ 23–28, Figs. 3–4.</p>



Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“second mode”</p> <p>cls. 1, 4, 11, 19, 20, 24, 30, 32</p>	<p>plain and ordinary meaning, a mode that differs from the “first” mode</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A (’523 Patent) at 2:38-61, 5:66-6:7, 10:26-31, 11:17-20, 13:59-14:10, 15:9-12, cls. 1, 4, 11, 19, 20, 24, 30, 32 and all dependent claims thereof.</p> <p><i>See also, e.g.</i>, Ex. N (IPR2022-0063) Paper 1 (Petition).</p>	<p>“self-test mode”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A (’523 Patent) at Abstract, 1:30–34, 1:38–41, 2:33–3:6, 4:47–52, 5:66–6:26, 9:43–10:36, 11:16–26, 13:44–14:56, 15:3–41, Figs. 2, 3, 4–6 and associated disclosure; cl. 1.</p> <p><i>See also, e.g.</i>, Ex. B (’523 FH) Prelim. Amendment dated Apr. 18, 2015 at pp. 2–9; ’523 FH Office Action dated Mar. 9, 2016 at p. 4; ’523 FH Amendment and Response dated July 11, 2016 at pp. 3, , 15–16; ’523 FH Certification and Request for Consideration Under the After Final Consideration Pilot Program 2.0 dated Feb. 8, 2018; ’523 FH Amendment dated Feb. 8, 2018 at pp. 3–4, 12; Ex. C (IPR2022-0063) Paper 13 (IPR Institution Decision) at pp. 27, 44; Ex. D (IPR2020-01421) Paper 6 (Patent Owner’s Prelim. Response) at pp. 14– 15; Ex. K (Provisional App. No. 61/044801) ¶¶ 23–28, Figs. 3–4.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>"data module"</p> <p>cls. 1, 2, 6, 7, 15, 18</p>	<p>plain and ordinary meaning, that is, an assembly of components or circuitry associated with data transfer or handling</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:33-47, 2:53-61, 3:46-49, 5:15-6:42, 8:42-47, 9:32-34, 10:7-13, 11:42-47, 12:20-26, 12:43-62, 13:6-10, 13:34-43, 15:9-12, 15:38-41, Figs. 1-3 and associated disclosures, cls. 1, 2, 6, 7, 15, 18 and all dependent claims thereof.</p>	<p>"integrated circuit package including a plurality of data handlers"</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at Abstract, 2:33-61, 3:46-49, 5:15-16, 8:41-47, 9:32-10:36, 12:43-62, 13:6-10, 13:34-37, Figs. 1-3 and associated disclosure; cls. 1, 19.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Amendment dated July 11, 2016 at p. 18; '523 FH Office Action dated Dec. 8, 2017; '523 FH Amendment dated Feb. 8, 2018 at pp. 3-4, 12, 17.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“data handler[s]”</p> <p>cls. 2, 4, 5, 8, 9, 10, 11, 19, 20, 23, 24, 26, 28, 29, 30, 31, 32, 34</p>	<p>plain and ordinary meaning, that is, each data handler is a component for handling data</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:53-61, 5:15-5:25, 6:3-7, 8:10-9:31, 10:7-11:26, 11:66-12:19, 12:29-60, 13:6-16, 13:34-43, 14:10-25, 14:66-15:2, 15:44-47, 15:62-64, 16:3-6, Figs. 1-3 and associated disclosures, cls. 2, 4, 5, 8, 9, 10, 11, 19, 20, 23, 24, 26, 28, 29, 30, 31, 32, 34 and all dependent claims thereof.</p>	<p>“circuitry for generating and processing data”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 1:30–34, 1:38–41, 2:4–11, 2:53–61, 4:47–52, 5:15–27, 6:3–7, 8:10–9:31, 10:7–11:26, 11:66–12:10, 12:26–42, 13:6–16, 13:36–43, 14:5–25, 15:42–16:12, Figs. 2–3 and associated disclosure.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Office Action dated Dec. 8, 2017; '523 FH Amendment dated Feb. 8, 2018 at pp. 3–4, 12, 17; Ex. E (IPR2014-00970) Paper 10 (Patent Owner's Prelim. Response) at pp. 25–26; Ex. F (IPR2014-00970) Paper 16 (Patent Owner's Response) at pp. 19–21; Ex. G (IPR2014-01372) Paper 11 (Patent Owner's Prelim. Response) at pp. 20–21; Ex. L (Mangione-Smith Expert Decl.) dated May 26, 2017, ¶ 59.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“data handler logic element[s]”</p> <p>cls. 1, 2, 5, 10, 14, 17, 19, 23</p>	<p>plain and ordinary meaning, that is, logic element(s) in data handler</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 10:21-49, 12:43-50, Fig. 3 and associated disclosure, cls. 1, 2, 5, 10, 14, 17, 19, 23 and all dependent claims thereof.</p> <p><i>See also, e.g.</i>, Ex. O (IPR2014-00970) Paper 1 (Petition), Ex. P (IPR2014-01372) Paper 1 (Petition).</p>	<p>“circuitry within the data handler that generates the data patterns”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 1:30-34, 1:38-41, 2:4-11, 4:47-52, 10:17-31, 10:38-44, 12:43-50, Figs. 2-3 and associated disclosure.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Office Action dated Dec. 8, 2017; '523 FH Amendment dated Feb. 8, 2018 at pp. 3-4, 12, 17; Ex. E (IPR2014-00970) Paper 10 (Patent Owner's Prelim. Response) at pp. 25-26; Ex. F (IPR2014-00970) Paper 16 (Patent Owner's Response) at pp. 19-21; Ex. G (IPR2014-01372) Paper 11 (Patent Owner's Prelim. Response) at pp. 20-21; Ex. L (Mangione-Smith Expert Decl.) dated May 26, 2017, ¶ 59.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“wherein the memory module is operable in any of a plurality of modes including a first mode and a second mode” / “wherein the memory module is configurable to operate in any of at least a first mode and a second mode”</p> <p>cls. 1, 19</p>	<p>plain and ordinary meaning, that is, “wherein the memory module can be operated in any of multiple modes that include a first mode and a second mode” / “wherein the memory module can be configured to operate in any of at least a first mode and a second mode”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 patent) at 2:38-3:6, 13:59-14:10, 15:9-34, Figs. 5-6 and associated disclosures, cls. 1, 19 and all dependent claims thereof.</p> <p><i>See also, e.g., id.</i> at 5:40-43, 5:66-6:10, 9:55-60, 10:26-31, 11:16-57.</p>	<p>Indefinite</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“first memory address and control signals” / “second memory address and control signals” / “third memory address and control signals”</p> <p>cls. 1, 4, 13, 16</p>	<p>plain and ordinary meaning, that is, respectively, first, second and third memory address and control signals</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:38-3:6, 3:41-45, 5:12-14, 5:49-6:18, 9:32-9:66, 13:3-6, 13:31-34, 15:47-49, Figs. 1-3 and associated disclosures, cls. 1, 4, 13, 16 and all dependent claims thereof.</p>	<p>“first, second and third memory address and control signals must be memory address and control signals having different frequencies”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 5:43–54, 5:63–66, 6:36–42, 9:64–66, 12:13–17, Figs. 1–3 and associated disclosures.</p> <p><i>See also, e.g.</i>, Ex. B ('523 FH) Amendment dated Feb. 8, 2018 at pp. 3–4, '523 FH Office Action dated Dec. 8, 2017 at p. 5.</p>

Disputed Term, Clause, or Phrase	Netlist's Proposed Construction & Evidence	Samsung and Google's Proposed Construction & Evidence
<p>“wherein the plurality of data handlers include physically separate integrated circuit packages, and wherein the each respective data handler is disposed on the circuit board at a position corresponding to the respective memory device group” / “wherein the plurality of data handlers include physically separate integrated circuit packages, and wherein the each respective data handler is disposed on the circuit board at a position corresponding to the respective group of one or more memory devices”</p> <p>cls. 9, 28</p>	<p>plain and ordinary meaning, that is, “wherein the multiple data handlers include physically separate integrated circuit packages, and wherein the each respective data handler is placed on the circuit board at a position corresponding to the respective memory device group” / “wherein the multiple data handlers include physically separate integrated circuit packages, and wherein the each respective data handler is placed on the circuit board at a position corresponding to the respective group of one or more memory devices”</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:53-61, 5:15-27, 6:3-7, 8:12-16, 8:20-23, 8:34-40, 8:41-9:9, 9:10-31, 10:13-22, 10:36-44, 11:16-20, 11:66-12:13, 13:6-16, 13:36-43, 14:17-22, Figs. 1-3 and associated disclosures, cls. 9, 28, and all dependent claims thereof.</p>	<p>“disposed on the circuit board at a position corresponding to” means “physically closer to the group of memory devices than any other memory devices”</p> <p>Otherwise, this term is indefinite.</p> <p><b><u>Intrinsic Evidence</u></b></p> <p><i>See, e.g.</i>, Ex. A ('523 Patent) at 2:53-61, 5:15-27, 6:3-7, 8:10-9:31, 10:7-11: 26, 11:66-12:10, 12:26-42, 13:6-16, 13:36-43, 14:5-25, 15:42-16:12, Figs. 1-3 and associated disclosures.</p>